

UC-NRLF



\$B 161 042

YC154C24



J. Shepherd Birley.



THE LIBRARY  
OF  
THE UNIVERSITY  
OF CALIFORNIA

PRESENTED BY  
PROF. CHARLES A. KOFOID AND  
MRS. PRUDENCE W. KOFOID







Digitized by the Internet Archive  
in 2007 with funding from  
Microsoft Corporation



**OXFORD ATLAS**  
OF  
**ANCIENT GEOGRAPHY,**

DEDICATED WITH PERMISSION TO THE

**REV. DR. RUSSELL,**

HEAD MASTER OF THE CHARTER HOUSE SCHOOL, LONDON.

---

**WHEN** it is considered that there are numerous Atlases of Ancient Geography already in circulation, it may not unreasonably be inquired, wherein consists the necessity of publishing another? To this question the Publisher deems it expedient to reply; and in doing so, without entering at length into the errors and imperfections of works of this description already before the public, he would remark, that it has been suggested to him that they are inadequate on many accounts for the purposes for which they are designed. Those Maps in particular which ought to be illustrative of the earlier writers of Greece and Rome, abound with numerous errors and omissions; and frequently the position of places is entirely at variance with the description given by those writers. In those systems of Ancient Geography which are most approved and are most exempt from error, the size of the Maps is so large, that they are not only unportable, but exceedingly inconvenient for frequent reference. It is true that some of a smaller scale have within these few years been published, but they evidently bear marks of having been copied from older works, with very few corrections and scarcely any additions. From these considerations it is presumed, that an Atlas free from these inconveniences and imperfections would be a desirable acquisition to the library of Students in the Universities, as well as Classical Scholars in general. The materials of the work will be derived from the most esteemed Geographical systems, under the superintendence of a Graduate Member of the University, who, before the Maps are presented to the public,

will diligently compare them with the Greek and Roman Historians they are intended to illustrate. Maps and Plans illustrative of Herodotus, Thucydides, Livy, &c. &c. will also be given, to which will be added Chronological Tables.

As the utility of the work must depend on its accuracy, the Publisher assures the Subscribers that no expence or industry shall be wanting to render it worthy the high patronage already received.

The Atlas will contain upwards of Sixty Quarto Plates, from Drawings made expressly for the work. The price to the Subscribers will not exceed Two Guineas: Non-Subscribers Three Guineas.

## SUBSCRIBERS.

### *Charter House.*

Rev. Dr. Russell  
Rev. R. Watkinson  
Rev. W. H. Chapman

### *Eton.*

Rev. Dr. Keate  
Rev. Mr. Carter  
Rev. Mr. Yonge  
Rev. Mr. Hawtrey  
Rev. Mr. Chapman, 2 copies  
Rev. Mr. Coleridge, 2 copies  
Rev. Mr. Dupuis  
Rev. Mr. Green  
Rev. Mr. Jenkins  
Rev. Mr. Moultrie

### *Harrow.*

Rev. Dr. Butler  
Rev. Mr. Edwards  
Rev. Mr. Mills  
Rev. Mr. Oxnam  
Rev. Mr. Phelps  
Rev. Mr. Streatfield

### *Rugby.*

Rev. Dr. Bloxham  
Mr. Stanley

### *Westminster.*

Rev. G. Preston

### *St. Paul's.*

St. Paul's School Library  
Rev. Dr. Sleath

### *Christ's Hospital.*

Rev. Dr. Trollope

### *Merchant Taylors.*

Rev. Mr. Bellamy  
Rev. J. B. Deane  
Rev. W. Blunt

### *Greenwich.*

Rev. Dr. Burney

### *Richmond.*

Rev. Mr. Tate  
Rev. Mr. Lockwood

### *Manchester.*

Rev. Dr. Smith

### *Norwich.*

Rev. E. Valpy

### *Reading.*

Rev. Dr. Valpy

Dulwich College Library

### *Bromley College.*

Rev. Dr. Scott

### *Elizabeth College, Guernsey.*

Rev. C. W. Stocker

### *Ilminster.*

Rev. the Head Master



*Ottery St. Mary.*

Rev. S. Cornish

*Aynho.*

Rev. Mr. Leonard

*Bromsgrove.*

Rev. I. Topham

*Dedham.*

Rev. Dr. Taylor

*Henley.*

Rev. Dr. Bussell

*North Walsham.*

Rev. Mr. Rees

*Oxford.*

Lord Holmesdale, Ch. Ch.

Rev. Mr. Rogers, Wadham

Rev. T. V. Bayne, Jesus

Rev. Mr. Hotham, University

Rev. W. Stone, Brasenose

Rev. J. Lingard, St. Mary Hall

Peter Hansell, Esq. University

Hugh Matthie, Esq. Pembroke

J. Worsley, Esq. Brasenose

J. E. P. Robertson, Esq. Exeter

W. Gilks, Esq. Pembroke

A. Skey, Esq. Exeter

W. Austen, Esq. Exeter

G. Forrester, Esq. Brasenose

H. Barton, Esq. Brasenose

H. Kuper, Esq. Merton

C. Crofts, Esq. Magd. Hall

C. Childers, Esq. Ch. Ch.

J. Maude, Esq. Queen's

W. J. Chesshyre, Esq. Balliol

W. Platt, Esq. Brasenose

W. H. Fellowes, Esq. Ch. Ch.

T. Denne, Esq. Ch. Ch.

H. D. Wickham, Esq. Exeter

H. Gwyn, Esq. Trinity

J. A. Giles, Esq. Corpus

W. D. Bernard, Esq. Wadham

J. H. Harding, Esq. Exeter

H. Merivale, Esq. Trinity

H. Crommelin, Esq. Exeter

C. Bowles, Esq. Exeter

W. Stocker, Esq. St. John's

W. Cayley, Esq. Ch. Ch.

T. Whipham, Esq. Trinity

G. Goodwin, Esq. Queen's

W. Bowyer, Esq. Brasenose

J. W. Warter, Esq. Ch. Ch.

Rev. P. Robinson, Lincoln

J. Evans, Esq. Worcester

C. P. Loft, Esq. Exeter

C. Jackson, Esq. Lincoln

J. Bazely, Esq. Queen's

W. Bridge, Esq. Ch. Ch.

J. R. Bloxam, Esq. Ch. Ch.

J. Pack, Esq. Ch. Ch.

B. Botfield, Esq. Ch. Ch.

G. Madan, Esq. Ch. Ch.

P. Agar, Esq. Trinity

T. Staniforth, Esq. Ch. Ch.

S. Edwards, Esq. Trinity

Rev. Mr. Gutch, *Seagrave*J. Gutch, Esq. *Bristol*W. Ormsby, Esq. *Cheltenham*Mr. Gardnor, *London*Rev. J. Hambleton, *Wallingford*Colonel Handcock, *Hereford*

## LIST OF THE MAPS AND PLANS.

World.	Macedonia.
Britain.	*Thrace.
Roman Empire during the Punic War.	*Northern Greece.
Roman Empire during the time of Augustus.	*Central Greece.
Spain.	*Peloponnesus.
Gaul.	*Coast of Asia Minor and Islands in Ægean Sea.
*Germany.	*Asia Minor.
*Cisalpine Gaul.	Countries between Sardis and Susa.
*Central Italy.	Asia.
*Italy and Sicily.	*Africa.
Sicily.	Palestine.
Greece and its Colonies.	Egypt.

Those marked thus \* will be double the size of the other Maps.

<i>To illustrate Herodotus.</i>	<i>To illustrate Thucydides.</i>	<i>To illustrate Livy.</i>
The World.	Sicily.	Mysia and Lydia.
Egypt.	Acarnania and Ætolia.	Rome.
Delta.	Sybota.	Vicinity of Rome.
Scythia.	Stratos.	Battle of Caudine Forks.
Samos and Mycale.	Olpe.	Passage of the Rhone.
Libya.	Pallene and Siege of Potidæa.	Battle of the Trebia.
Asia.	Amphipolis.	Battle of Trasimeneus.
Battle of Marathon.	Pylos.	Battle of Cannæ.
Bridge of Boats.	Battles in the Crissæan Gulph.	Plan of Syracuse.
Pass of Thermopylæ.	Siege of Plataea.	Siege of Syracuse.
Battle of Plataea.	Plan of Syracuse.	Battle at the Metaurus.
Battle of Salamis.	Plan of Athens.	Battle of Zama.
Plan of Athens.	Chronological Table from the Battle of Plataea to the close of the Peloponnesian War.	Battle of Cynocephala.
Plan of Babylon.		Battle of Magnesia.
Chronological Table.		Plan of Sparta.
		Plan of a Roman Encampment, &c. &c.

*To illustrate Homer.*

The World.  
Map of the Trojan War.

*Miscellaneous.*

Plan of a Greek Theatre.  
Plan of a Roman Theatre.  
Catapulta.  
Balista.  
Testudo.  
Musculus and Pluteus.  
Battering Ram.  
Covered Galleries.  
&c. &c. &c.

OXFORD, PUBLISHED BY J. VINCENT; AND G. B. WHITTAKER,  
LONDON.

A LIST  
OF SOME OF THE MOST POPULAR  
**B O O K S**  
PUBLISHED BY J. VINCENT, OXFORD.

---

**NATURAL THEOLOGY**, by WILLIAM PALEY, D.D. illustrated by a Series of Plates, and Explanatory Notes. By JAMES PAXTON, Member of the Royal College of Surgeons, London. To which is added, **BOTANICAL THEOLOGY**, by JOHN SHUTE DUNCAN, M.A. Fellow of New College, Oxford. 2 vols. 8vo. price £1 8s.

In announcing this Work to the Public, it may be observed, that it has originated from the difficulty of understanding the argument, when applied to the mechanism in the structure of natural objects, and those instances of contrivance which demonstrate a Creative Power.

The physical arguments in Natural History relate to many objects which indeed may be generally subjected to our senses, but (to instance only anatomy) it is probable that they have never been seen by the generality of the readers. Those organs destined to mechanical functions—the bones of man—the muscles—comparative anatomy—relations and compensations even of insects and plants—all admit of graphic representation. The plates which are given in the work are all accurately represented from original designs obtained from the most authentic sources, and have been submitted to the critical examination of the most competent judges.

“ Archdeacon Paley’s work is too universally known to require comment. This edition of it has the advantage of a clear and legible type—no small recommendation; and of plates, which, with the editor’s “ explanatory notes,” are what they profess to be—illustrations, contributing very materially, we think, to a thorough understanding of the author.

“ The Supplement, which has its illustrations also, (carrying the discussion into, and collecting evidences from another department of nature,) will be found instructive, and very interesting.”

*New Monthly Magazine, October, 1826.*

“ This is a well conceived work, containing plates of the principal subjects of anatomy and physiology, adduced by Paley. The author speaks of them as made from nature; and they are obviously a very useful and illustrative explanation. The volumes deserve to be in the hands of every one who takes the “ Natural Theology ” as a guide in one of the most interesting studies that can be offered to the mind of piety and wisdom.”

*Quarterly Theological Review, September, 1826.*

“ We are surprised that twenty-three years should have elapsed before the experiment was made, but we should be ungrateful not to acknowledge its utility, however late the attempt.”

*Gents. Mag. July, 1826.*

**BOTANICAL THEOLOGY**, or Evidences of the Existence and Attributes of the Deity collected from the appearances of Nature, by JOHN SHUTE DUNCAN, M.A. Fellow of New College. Illustrated with Four Engravings, second edition. 8vo. price 4s. Intended as a Supplement to PALEY’S NATURAL THEOLOGY.

A SERIES of THIRTY SIX ENGRAVINGS, with descriptive letter-press, illustrative of PALEY’S NATURAL THEOLOGY, 8vo. boards, price 15s.

A few proof impressions may be had, price £1 1s.



*Popular Books lately published by J. Vincent, Oxford.*

A SERIES of THIRTY SIX LITHOGRAPHIC PLATES, with descriptive letter-press, illustrative of PALEY'S NATURAL THEOLOGY, 8vo. boards, price 12s.

AN INTRODUCTORY LECTURE to a Course in Comparative Anatomy, illustrative of Paley's Natural Theology. By JOHN KIDD, M.D. and F.R.S. Regius Professor of Medicine in the University of Oxford. Second Edition, price 2s. 6d.

## MAPS AND PLANS,

DEDICATED WITH PERMISSION TO THE REV. DR. RUSSELL, HEAD MASTER  
OF THE CHARTER HOUSE SCHOOL, LONDON.

MAPS AND PLANS illustrative of THUCYDIDES, 8vo. boards, price 10s. 6d.

"If we were desired to mention a series of works calculated to assist the Student in his progress, we should refer him to some publications which have lately appeared at Oxford. Of these, the two Atlases before us are not the least useful. They contain not only the general Maps necessary for the study of Grecian History, but also Plans and Sections illustrative of particular passages in the authors above mentioned . . . . These chorographical treasures, long locked up in expensive publications, are now given to the world. Gail and Rennel are the principal authorities, and the engraver has executed his task with ability."

*Extract from the Gents. Mag. vol. 95, part 2. Sup. December, 1826.*

MAPS AND PLANS illustrative of HERODOTUS, 8vo. boards, price 10s. 6d.

"The Collection before us is chiefly selected from D'Anville, Barbee du Bocage, Rennel, and Gail, and forms an excellent Geographical Note Book for the Student. Besides the general Maps included in that portion of history, it includes Plans without which it is impossible to understand those authors thoroughly. We allude particularly to the Track of Darius Hystaspes in Scythia, the Pass of Thermopylæ, the siege of Platæa, and Battles in Crissæan Gulph, etc. Similar illustrations of Livy, Polybius, and Xenophon, are announced, and a General Ancient Atlas is promised.

"We earnestly recommend to the classical student an immediate acquaintance with the Maps under review." *Classical Journal, December, 1825.*

MAPS AND PLANS illustrative of LIVY, 8vo. boards, price 12s.

## QUESTIONS.

QUESTIONS on HERODOTUS, price 4s. boards.

\_\_\_\_\_ on THUCYDIDES, price 4s. boards.

\_\_\_\_\_ on LIVY, Book 21 to 30, price 1s.

\_\_\_\_\_ on the OLD TESTAMENT, with References to the most approved Commentators, fourth edition, price 1s.

\_\_\_\_\_ on the NEW TESTAMENT, with References to the most approved Commentators, fourth edition, price 1s.

QUESTIONS on the ARTICLES of the CHURCH OF ENGLAND, fourth edition, price 1s.

\_\_\_\_\_ on LOGIC, price 1s.

## TRANSLATIONS.

The **ETHICS** of **ARISTOTLE** literally translated, with Notes, 8vo. second edition, price 10s. 6d.

The **TRAGEDIES** of **ÆSCHYLUS** literally translated into English prose, 8vo. price 10s. 6d.

**HERODOTUS** literally translated, illustrated with copious Notes, explanatory and critical, from Larcher, Rennel, Mitford, &c.; to which is added, a Chronology. 2 vols. 8vo. price £1 4s.

The **RUDIMENTS** of the **ART OF LOGIC** literally translated, with Notes, third edition, price 3s. 6d.

**THUCYDIDES'S HISTORY** of the **GRECIAN WAR** literally translated by **HOBBS**, with Notes and an Analysis, 8vo. price 12s.

## DIVINITY.

The **ARTICLES** of the **CHURCH OF ENGLAND**, with Notes compiled from Burnet, Welshman, Tomline, &c. confirmed by Texts of the Holy Scripture, price 1s.

The **ARTICLES** of the **CHURCH OF ENGLAND**, with Proofs and a Series of Questions, price 1s.

The **ARTICLES** of the **CHURCH OF ENGLAND**, with a Commentary, price 1s.

**ANSWERS** to the **QUESTIONS** on the **ARTICLES** of the **CHURCH OF ENGLAND**, price 1s.

**DISCOURSES** of a **FATHER** to his **CHILDREN**, 12mo. 3s. 6d.

**A COMPENDIOUS GUIDE** to the **STUDY** of the **HOLY SCRIPTURES**, 12mo.

**EPITOME** of the **OLD** and **NEW TESTAMENTS**, intended chiefly for Students in Divinity, price 4s.

**HARMONY** of the **OLD** and **NEW TESTAMENTS**, price 2s.

**HISTORICAL CONNECTION** between the **OLD** and **NEW TESTAMENTS**, shewing the Types in the former, and their fulfilment in the latter, second edition, price 1s.

"This little Tract, intended for Undergraduates previous to their second examination, deserves the attention of Candidates for holy orders. A concise Prophetical Connection, with a Table of the Prophecies and their fulfilment, has issued from the same press, with Questions on the Scriptures, and the Articles of the Church of England. To the more abstruse questions references are given, which may induce the Student to consult several very valuable Works. From the specimens we have seen, we confidently recommend the whole series to Tutors out of the University."

*Classical Journal, September, 1824.*



*Popular Books lately published by J. Vincent, Oxford.*

LAYMAN'S THEOLOGICAL INSTRUCTOR, or a Plain Exposition of the Doctrines of the Church of England, 8vo. price 10s. 6d.

MANUAL OF DIVINITY, price 6s. containing

An Historical Connection between the Old and New Testaments.

A Prophetical Connection between the Old and New Testaments.

A Summary of the New Testament.

A Summary of the Evidences of the Christian Religion.

The Harmony of the Old and New Testaments.

The Articles of the Church of England, with Notes and Scripture Proofs.

PORTEUS'S SUMMARY of the EVIDENCES OF THE CHRISTIAN RELIGION, price 1s.

PROPHETICAL CONNECTION between the OLD AND NEW TESTAMENTS, with a Table of the Prophecies and their fulfilment, third edition, price 1s.

SUMMARY of the NEW TESTAMENT, price 2s. boards.

MISCELLANEOUS.

OXFORD PRIZE POEMS, being a Collection of such Poems as have at various times obtained Prizes in the University of Oxford. Extra boards, price 7s.

LEXICON HERODOTEUM, SCHWEIGHÆUSER. 8vo. price 14s.

SOPHOCLIS TRAGEDIÆ, BRUNCK, SCHAEFER, ET ERFURDT, 2 vols. 32mo. price 8s.

*Preparing for publication, and will be ready in June,  
on one large sheet, price 7s. 6d. coloured,*

A TABULAR VIEW OF VOLCANIC PHENOMENA, comprising a list of the Burning Mountains, which are either now in action, or have existed in former periods throughout the Globe; together with the dates of their respective Eruptions, and of the principal Earthquakes which they have occasioned. By CHARLES DAUBENY, M.D. F.R.S. Professor of Chemistry in the University of Oxford. Intended as a Companion to the Lectures on Volcanos, by the same author.

An INTRODUCTION to the STUDY OF HUMAN ANATOMY, containing upwards of Three Hundred Wood-cuts of isolated parts of the body, and several Copper-plate Engravings of the whole figure. This Work will form a concise yet complete and familiar Compendium for the general scientific enquirer and professional student. By JAMES PAXTON, Member of the Royal College of Surgeons, London, and author of Illustrations of Paley's Natural Theology.

# ILLUSTRATIONS

OF

PALEY'S NATURAL THEOLOGY;

WITH

DESCRIPTIVE LETTER PRESS.

BY JAMES PAXTON,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS, LONDON.

“Of muscular actions, even of those well understood, some of the most curious are incapable of popular explanation, without the aid of Plates and Figures.”

PALEY'S THEOLOGY, Ch. ix.

OXFORD:

PUBLISHED BY J. VINCENT.

MDCCCXXVI.

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 311

PHYSICS 311

PHYSICS 311

PHYSICS 311

TO THE

HONOURABLE AND RIGHT REVEREND

SHUTE BARRINGTON, LL. D.

LORD BISHOP OF DURHAM.

MY LORD,

To your suggestion the world is indebted for the existence of Dr. Paley's valuable work on Natural Theology. The universal and permanent esteem in which it has been held in this country, and its favourable reception in France, even after the desolating influence of the Revolution, have abundantly approved your Lordship's selection both of the subject and of the person to whom you intrusted it.

In looking round, then, for a patron for these ILLUSTRATIONS, it was natural to have recourse to him who was the original suggestor of the work which it is their object to explain. Nor was I disappointed in my wish; your Lordship

DEDICATION.

not only condescending to approve of the design, but to encourage me in its prosecution by your very liberal support. For this distinguished honour you will believe me deeply sensible; and if I may indulge the hope that my humble efforts will increase the utility of so eminent a writer, I shall consider it the highest gratification.

I am,

MY LORD,

With great veneration,

Your Lordship's most obliged

And obedient servant,

JAMES PAXTON.

*Oxford,*

*January 1, 1826.*



## P R E F A C E.

THE works of Dr. Paley have acquired that popularity which renders it scarcely necessary to observe that his *Natural Theology* was written to establish the truth of the agency and wisdom of the Deity from the admirable contrivances and mechanism displayed in natural objects, inferring from thence that the knowledge and power requisite for the formation of created nature must be infinite.

The principal physical arguments made use of, relate to organs destined to mechanical functions, as the bones of man—the muscles—the structure of animals, or comparative anatomy—prospective and compensatory contrivances—insects and plants: with most of these objects the anatomist only can be conversant; but all admit of graphic representation, and such has been attempted.

The designs of the following plates are original,

## PREFACE.

obtained from the most authentic sources, and submitted to the critical examination of the most competent judges. It is hoped that the illustrations will be found the more interesting from their being simple and unincumbered by parts irrelevant to the subject of the author. These are accompanied by notes, which are intended to supply defective or correct erroneous statements, and to explain the plates.

The undertaking originated in the difficulty of understanding the various descriptions introduced by Paley, not however from his want of clearness, for the subjects in general are plainly and correctly described; but it is evident that visible representations strike the mind more forcibly than mere descriptions. It is therefore presumed that the subsequent illustrations will be an acquisition, by bringing vividly to the imagination, objects of which only an imperfect idea could otherwise be formed; and that they will consequently render the work more intelligible to the general reader.



## CHAPTER I.

### TAB. I.—THE WATCH.

FIG. 1. The *spring* and *barrel*, or first power, with the *chain* which connects it to—

FIG. 2. The *fusee* and *great* wheel. The fusee is tapered at the top to correct the irregular recoil of the spring. The great wheel turns—

FIG. 3. The *centre* wheel and pinion, which makes one revolution in an hour, carries the minute hand, and turns—

FIG. 4. The *third* wheel and pinion, which turns the contrate wheel.

FIG. 5. The *contrate* wheel, which makes one revolution in a minute, and turns the balance or escape wheel.

FIG. 6. The *balance* wheel, which acts upon the pallets of the verge, and escapes or drops from one pallet to another alternately, thereby keeping the balance in constant vibration.

FIG. 7. The *balance verge* and *balance* or *pendulum spring*, which regulates the whole machine.

FIG. 8. The *cannon pinion*, affixed to the centre wheel arbour, on which the minute hand is placed.

FIG. 9. The *minute* wheel.

FIG. 10. The *hour* wheel. These wheels are turned by the cannon pinion, and having a greater number of teeth, move much slower than the cannon pinion, and mark the hour by the hand on the dial.

The above is a description of the several wheels alluded to by Paley. Their relative situation, and combined movement, may be seen by the simple inspection of a watch.

# TAB. I.







# CHAPTER III.

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

## CHAPTER III.

### TAB. II.—THE EYE.

FIG. 1. The crystalline lens of a fish; it is proportionably larger than in other animals, and perfectly spherical.

FIG. 2. A section of the human eye. It is formed of various coats, or membranes, containing pellucid humours of different degrees of density.

The external membrane, called *sclerotic*, is strong and firm, the support of the spherical figure of the eye: it is deficient in the centre, but that part is supplied by the *cornea*, which is transparent and projects like the segment of a small globe from one of larger size. The interior of the sclerotic is lined by the *choroid*, covered by a dark mucous secretion, termed *pigmentum nigrum*, intended to absorb the superfluous rays of light. The *choroid* is represented in the plate by the black line. The third and inner membrane, which is marked by the white line, is the *retina*, the expanded optic nerve.

Within these coats of the eye, are the *humours*. *a*, the *aqueous* humour, a thin fluid like water; *b*, the *crystalline lens* of a dense texture; *c*, the *vitreous* humour, in appearance like jelly. Together they make a compound lens, which refracts the rays of light issuing from an object, *d*, and delineates its figure, *e*, in the focus upon the retina, inverted.

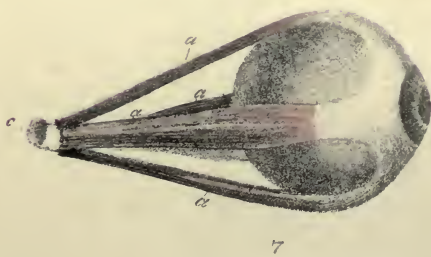
FIG. 3. The *lens of the telescope*.

FIG. 4. The crystalline *lens*.

FIG. 5, 6. A plan of the circular and radiated fibres which the *iris* is supposed to possess; the former contracts, the latter dilates the pupil, or aperture formed by the inner margin of the iris.

FIG. 7. *a, a, a, a*, the four *straight* muscles, arising from the bottom of the orbit, where they surround, *c*, the optic nerve; and are inserted by broad thin tendons at the fore part of the globe of the eye into the tunica sclerotica.

TAB. II.









### CHAPTER III.

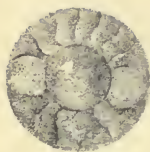
#### TAB. III.—THE EYE OF BIRDS AND OF THE EEL.

FIG. 1, 2. The *flexible rim, or hoop*, of the eye of birds, consisting of bony plates, which occupy the front of the sclerotic; lying close together and overlapping each other. These bony plates in general form a slightly convex ring, Fig. 1, but in the *accipitres* they form a concave ring, as in Fig. 2, the bony rim of a hawk.

FIG. 3, 4, 6. Exhibit the *marsupium*; it arises from the back of the eye, proceeding apparently through a slit in the retina; it passes obliquely into the vitreous humour, and terminates in that part, as in the eagle, Fig. 3, a section of the eye of the *falco chrysaëtos*. In some species it reaches the lens, and is attached to it, Fig. 4, 6. In the plate the marsupium is marked with a \*.

FIG. 5. The head of an *eel*; the skin is represented turned back; and as the *transparent horny covering* of the eye, *a, a*, is a cuticular covering, it is separated with it.

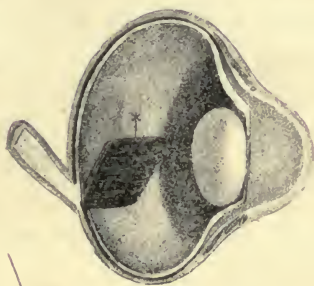
TAB. III.



1



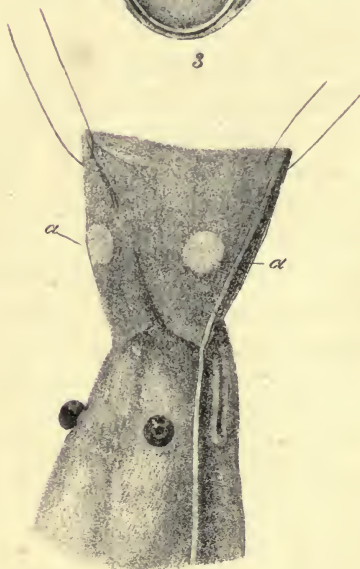
2



3



4



5



6



### CHAPTER III

THE HISTORY OF THE  
REIGN OF THE

First of the reign of King Henry the First, who reigned from the year 1100 to the year 1135, was a period of great importance in the history of England. It was a period of great internal and external wars, and of great internal and external peace.

First of the reign of King Henry the First, who reigned from the year 1100 to the year 1135, was a period of great importance in the history of England. It was a period of great internal and external wars, and of great internal and external peace.

First of the reign of King Henry the First, who reigned from the year 1100 to the year 1135, was a period of great importance in the history of England. It was a period of great internal and external wars, and of great internal and external peace.



### CHAPTER III.

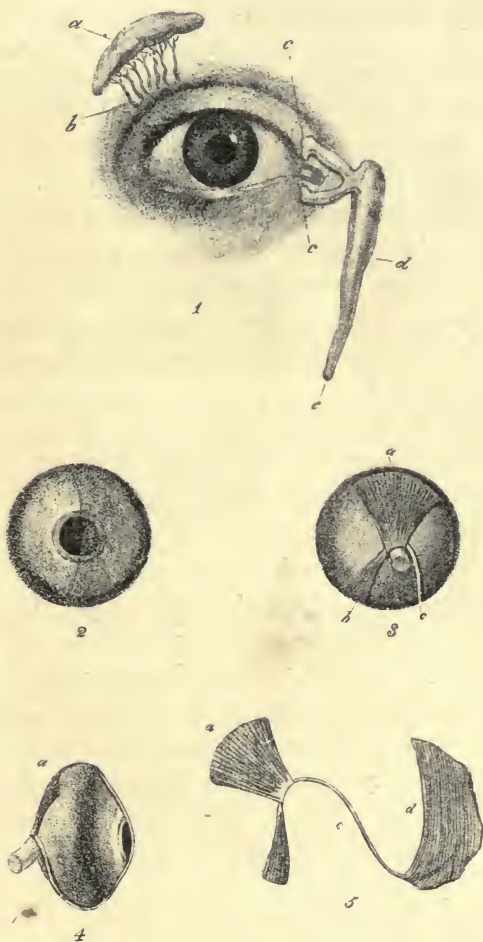
#### TAB. IV.—THE LACHRYMAL APPARATUS AND NICTITATING MEMBRANE.

FIG. 1. *a*, the *lachrymal gland*, the source of the tears; *b*, its several *ducts*, diffusing this fluid over the eye; *c, c*, the *puncta lachrymalia*, which convey the tears into, *d*, the *lachrymal sac*, terminating in the nostril.

FIG. 2. The *nictitating membrane*, or third eyelid; it is a thin semi-transparent fold of the conjunctive, which, in a state of rest, lies in the inner corner of the eye, with its loose edge nearly vertical, but can be drawn out so as to cover the whole front of the globe. In this figure it is represented in the act of being drawn over the eye.

FIG. 3. The muscles of the nictitating membrane are very singular in their form and action, they are attached to the back of the sclerotic; one of them, *a*, which from its shape is called *quadratus*, has its origin from the upper and back part of the sclerotic; its fibres descend towards the optic nerve, and terminate in a curved margin with a cylindrical canal in it. The other muscle, *b*, which is called *pyramidalis*, arises from the lower and back part of the sclerotic. It has a long tendinous chord, *c*, which passes through the canal of the quadratus, *a*, as a pulley, and having arrived at the lower and exterior part of the eye-ball, is inserted into the loose edge of the nictitating membrane. This description refers also to Fig 4, a profile of the eye, and Fig. 5, the membrane and its muscles detached from the eye.

# TAB. IV.







## CHAPTER III.

### TAB. V.—THE HUMAN EAR, AND TYMPANUM OF THE ELEPHANT.

FIG. 1. *a*, the *external ear*; *b*, the *meatus auditorius externus*; *c*, the *membrana tympani*; *d*, the *ossicula auditus*; *e*, the *semicircular canals*; *f*, the *cochlea*; *g*, a section of the *eustachian tube*, which extends from the cavity of the tympanum, to the interior of the fauces.

FIG. 2. The bones of the ear magnified. *a*, the *malleus*, connected by a process to the tympanum: the round head is lodged in the body of, *b*, the *incus*, and the incus is united to, *c*, the *os orbiculare*, and this to, *d*, the *stapes*.

FIG. 3. The *labyrinth*, so named from the intricacy of its cavities; it is situated in the petrous part of the temporal bone, and consists of the *vestibule*, or *central cavity*, three *semicircular canals*, and *cochlea*, and is best explained by the plate, Fig. 1, and 3.

The vibrations of sounds, striking against the *membrana tympani*, are propagated by the intervention of these four little bones, to the *water* contained within the cavities of the labyrinth; and by means of this water the impression is conveyed to the extremities of the *auditory nerve*.

Fish require no tympanum, nor external opening to the ear; the fluid in which they live is the medium for conducting sounds through the bones of the head.

FIG. 4. The tympanum of the *elephant*, of its natural size.



# TAB. V.







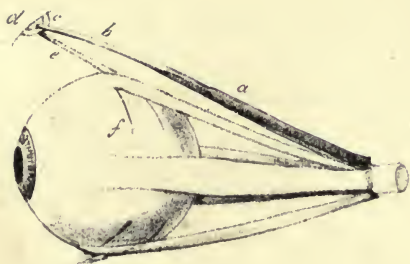
## CHAPTER VII.

### TAB. VI.—TROCHLEAR MUSCLE OF THE EYE, AND KIDNEY.

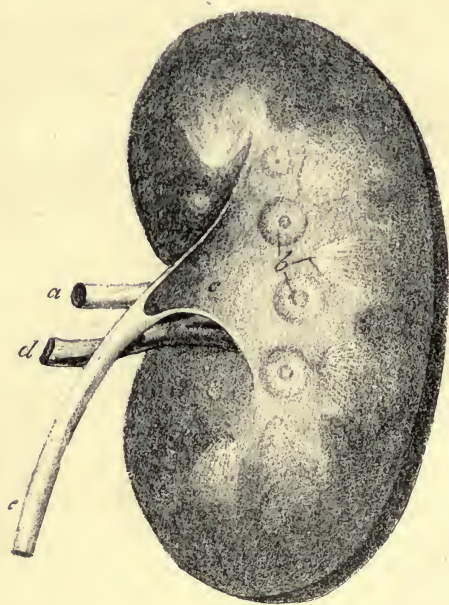
FIG. 1. The *trochlear or superior oblique* muscle, arises with the straight muscles from the bottom of the orbit. Its muscular portion, *a*, is extended over the upper part of the eye-ball, and gradually assumes the form of a smooth round tendon, *b*, which passes through the pulley, *c*, and is fixed to the inner edge of the orbit, *d*, then turning backwards and downwards, *e*, is inserted into, *f*, the sclerotic membrane.

FIG. 2. A section of the *human kidney*; *a*, the *emulgent artery* which conveys the blood to, *b*, the *papillæ*, where the peculiar fluid is secreted; from whence it passes by tubes into *c*, the *pelvis*; *d*, the *emulgent vein* which returns the blood; *e*, the *ureter*, or tube, which conducts the secretion to its receptacle.

# TAB. VI.



1



2





# WABEHL VII

THE WABEHL VII

The Wabehl VII is a small, light, and portable boat, designed for use in shallow water. It is constructed of wood, and is capable of carrying a load of up to 1000 lbs. The boat is 12 feet long, 4 feet wide, and 2 feet deep. It is propelled by a single oar, and is capable of moving at a speed of up to 10 miles per hour. The boat is also equipped with a small cabin, and is suitable for use as a fishing boat or a pleasure boat.

The Wabehl VII is a small, light, and portable boat, designed for use in shallow water. It is constructed of wood, and is capable of carrying a load of up to 1000 lbs. The boat is 12 feet long, 4 feet wide, and 2 feet deep. It is propelled by a single oar, and is capable of moving at a speed of up to 10 miles per hour. The boat is also equipped with a small cabin, and is suitable for use as a fishing boat or a pleasure boat.

## CHAPTER VIII.

### TAB. VII.—VERTEBRÆ OF THE HUMAN NECK.

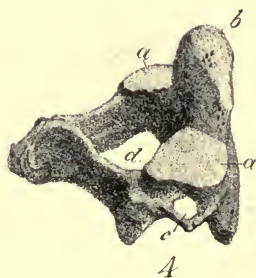
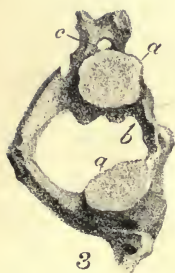
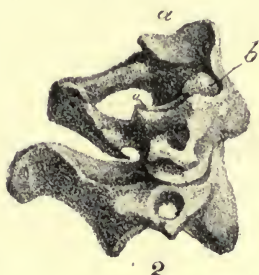
FIG. 1. A representation of the head and the neck ; the latter is composed of seven bones called *vertebræ*.

FIG. 2. exhibits the first and second vertebræ, with their mode of connexion. The uppermost vertebra, termed the *atlas*, from its supporting the globe of the head, has an oval *concave* surface on either side, *a, a*, for the reception of two corresponding *convex* surfaces placed on the lower part of the head, in such a manner as only to admit of the action of bending and raising the head.

FIG. 3. The *atlas*.

FIG. 4. The second vertebra, called *dentata*, has two plane surfaces, *a, a*, adapted to the planes, *a, a*, Fig. 3. of the atlas : and this manner of articulation provides for the turning of the head laterally in almost every direction. Fig. 2. and 4. *b, b*, shew the *tooth-like process* which affords a firm pivot for the production of the lateral motion just described. This process is received into a corresponding *indentation* of the atlas, Fig. 3. *b*, and a strong ligament passes behind it, serving as an effectual security against dislocation, and consequent compression of the spinal marrow. Fig. 4. *d*, marks the situation for the spinal marrow, which passes through the ring of each vertebra. The letter, *c*, indicates a perforation in the lateral process ; and as there is a corresponding perforation in each lateral, or as it is termed *transverse* process of the seven *cervical* vertebræ, a continuous passage is thus formed for the protection of two important blood-vessels destined to supply the brain.

# TAB. VII.









## CHAPTER VIII.

### TAB. VIII.—BONES OF THE ARM.

FIG. 1. *a*, the *humerus*; the head, *b*, is a portion of a sphere, and exhibits an example of the *ball and socket*, or universal joint; *c*, the *hinge joint*, instanced in the elbow; *d*, the *radius*; *e*, the *ulna*. The radius belongs more peculiarly to the wrist, being the bone which supports the hand, and which turns with it in all its revolving motions. The ulna principally belongs to the elbow joint, for by it we perform all the actions of bending or extending the arm.

FIG. 2. *a*, the *humerus*: *b*, shows the connexion of the radius, with, *c*, the *ulna*, at the elbow. The mode of articulation at the wrist is seen, Fig. 1.

TAB.VIII.









## CHAPTER VIII.

### TAB. IX.—THE SPINE.

FIG. 1. The *human spine*, so named from the series of sharp processes projecting from the posterior part of the vertebræ. The spine consists of *seven* vertebræ of the neck, distinguished by the perforations in their transverse processes; of *twelve* belonging to the back, and marked by depressions for the heads of the ribs; and, lastly, of *five* belonging to the loins, which are larger than the other vertebræ.

FIG. 2. A separated *dorsal vertebra*: *a*, the body of the vertebra; *b*, the ring through which the spinal marrow passes: *c, c*, the articulating surfaces to which the ribs are united.

FIG. 3. The vertebra of a very large serpent, drawn from a specimen belonging to the Anatomy school of Christ Church, Oxford. This figure shews the socket of the vertebra.

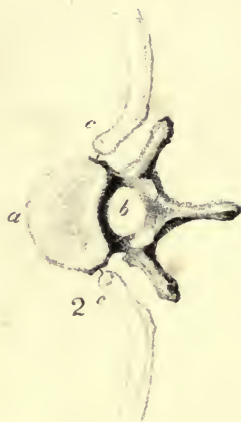
FIG. 4. the ball or rounded joint, evidently calculated for extensive motion.

FIG. 5. A part of the spine of the same reptile; it is exceedingly strong, each bone being united to the other by fifteen surfaces of articulation.

# TAB. IX.



1



2



3



4



5



# THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

## CHAPTER VIII.

### TAB. X.—THE CHEST, PATELLA, AND SHOULDER BLADE.

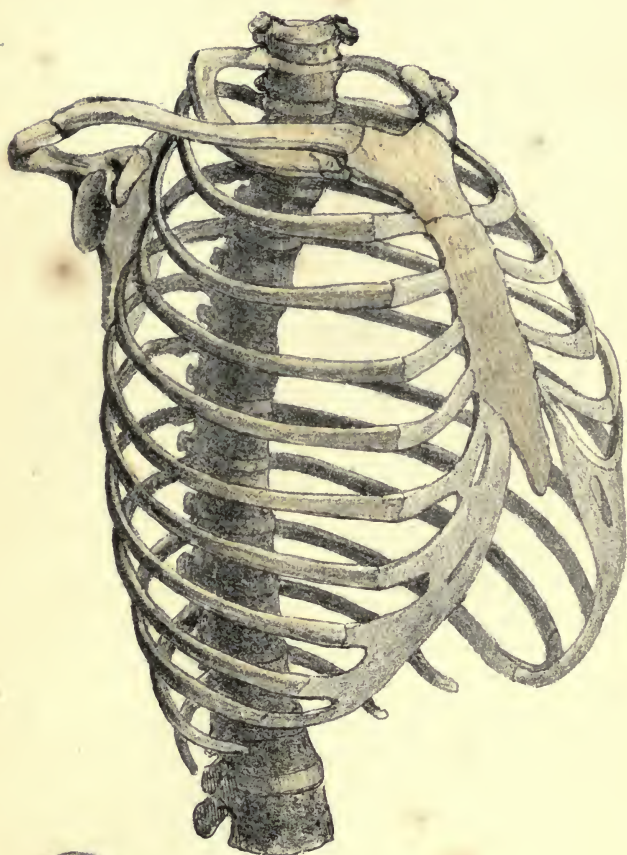
FIG. 1. The *spine*, *ribs*, and *sternum*, constitute the framework of the *chest* or *thorax*. Referring however to the plate, or to nature, we observe that the ribs are not continued throughout from the spine to the sternum, but intervening *cartilages* complete the form of the chest, by connecting the end of the rib to the breast bone. This is a further provision, relative to the mechanical function of the lungs, deserving notice. The muscles of respiration enlarge the capacity of the chest by elevating the ribs; and during the momentary interval of muscular action the cartilages, from their great *elasticity*, restore the ribs to their former position.

FIG. 2. Represents the true shape of the *patella*, the *anterior surface convex*. Fig. 3. the *posterior surface*, has two *concave* depressions adapted to the condyles of the thigh bone. The projection of the patella, as a lever, or pulley, removes the acting force from the centre of motion, by which means the muscles have a greater advantage in extending the leg.

FIG. 4. The shoulder-blade (*scapula*) is joined to the collar bone by ligaments, and to the thorax by powerful muscles which are capable of sustaining immense weights, and whose action gives the various directions to the arm, and enables it freely to revolve at the shoulder joint.



TAB. X.







# CHAPTER VII

THE NEW YORK AND THE NEW YORK

THE NEW YORK AND THE NEW YORK

THE NEW YORK AND THE NEW YORK

THE NEW YORK AND THE NEW YORK

THE NEW YORK AND THE NEW YORK

THE NEW YORK AND THE NEW YORK

THE NEW YORK AND THE NEW YORK

THE NEW YORK AND THE NEW YORK

THE NEW YORK AND THE NEW YORK

THE NEW YORK AND THE NEW YORK

THE NEW YORK AND THE NEW YORK

THE NEW YORK AND THE NEW YORK

THE NEW YORK AND THE NEW YORK

THE NEW YORK AND THE NEW YORK

THE NEW YORK AND THE NEW YORK

THE NEW YORK AND THE NEW YORK

## CHAPTER VIII.

### TAB. XI.—THE HIP, KNEE, AND ANKLE JOINTS.

FIG. 1. The capsular ligament is here opened in order to shew the ligament of the hip, named the *round ligament*. It allows considerable latitude of motion, at the same time that it is the great safe-guard against dislocation.

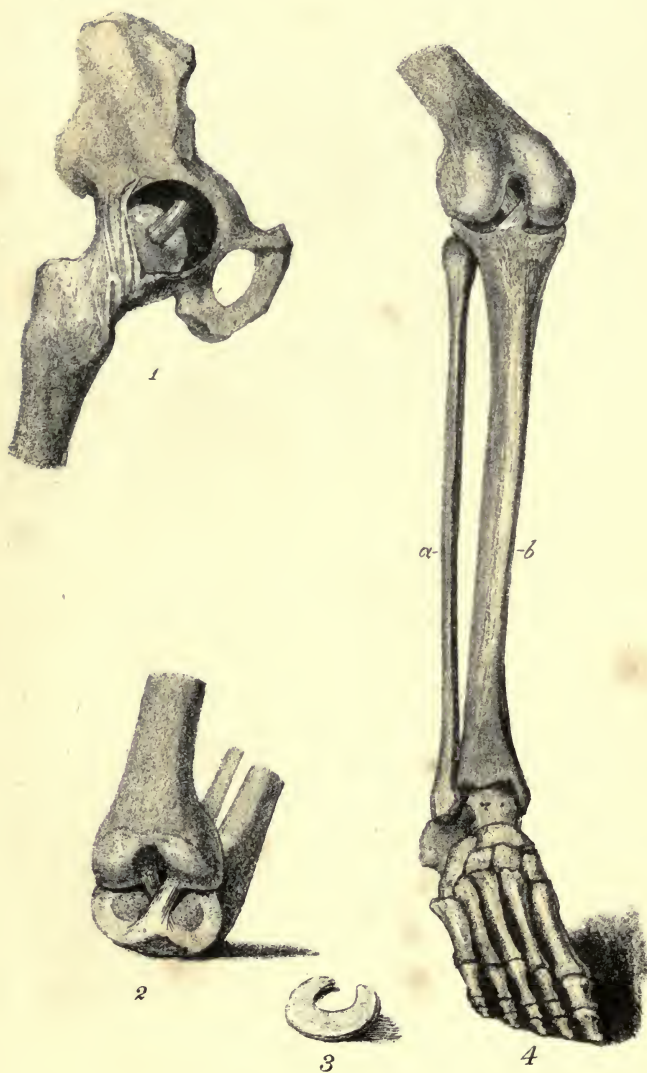
FIG. 2. and 4. The *crucial* or *internal ligaments* of the knee-joint arise from each side of the depression between the condyles of the thigh bone; the anterior is fixed into the centre, the posterior into the back of the articulation of the tibia. This structure properly limits the motions of the joint, and gives the firmness requisite for violent exertions. Viewing the form of the bones, we should consider it one of the weakest and most superficial, but the strength of its ligaments renders it the most secure, and the least liable to dislocation of any joint in the whole body.

FIG. 3. one of the *interarticular* cartilages of the knee, from their shape called *semilunar*; it is also represented *in situ* Fig. 2. The outer edge of each cartilage is thick, the inner concave edge thin; the sockets for the condyles of the thigh bone are thus rendered deeper, and the cartilages are so fixed as to allow a little play on the tibia, by which the joint moves with great freedom.

A moving cartilage is not common, but is peculiar to those joints whose motions are very frequent, or which move under a great weight. It is a contrivance found at the inner head of the collar bone and the articulation of the wrist, as well as at the knee. The obvious use is to lessen friction and facilitate motion.

FIG. 4. Exhibits the formation of the ankle joint; *a*, the *fibula*; *b*, the *tibia*.

TAB. XI.



*Published by James Paxton.*







## CHAPTER IX.

### TAB. XII.—THE SARTORIUS AND OBLIQUE MUSCLES OF THE HEAD.

FIG. 1. *a, a*, the *sartorius*, is the longest muscle of the whole human fabric : it is extended obliquely across the thigh from the fore part of the hip (the *anterior superior spinous process of the os illium*,) to the inner side of the tibia. Its office is to bend the knee and bring the leg inwards.

FIG. 2. There are two pairs of oblique muscles ; *a, a*, the *obliquus capitis superior*, arising from the transverse process of the atlas, and inserted into the occipital bone ; *b, b*, the *obliquus capitis inferior*, arising from the spinous process of the dentata, and inserted into the transverse process of the atlas.

TAB. XII.





7 A. B. 2. 17.

CHAPTER II.

THE HISTORY OF THE UNITED STATES.

THE HISTORY OF THE UNITED STATES, from the first settlement of the colonies to the present time, is a subject of great interest and importance. It is a subject which has attracted the attention of the whole world, and which has been the subject of many valuable works. The history of the United States is a history of a people who have been the most successful in the world, and who have been the most powerful in the world. It is a history of a people who have been the most generous in the world, and who have been the most brave in the world. It is a history of a people who have been the most industrious in the world, and who have been the most enterprising in the world. It is a history of a people who have been the most patriotic in the world, and who have been the most devoted in the world. It is a history of a people who have been the most virtuous in the world, and who have been the most noble in the world. It is a history of a people who have been the most generous in the world, and who have been the most brave in the world. It is a history of a people who have been the most industrious in the world, and who have been the most enterprising in the world. It is a history of a people who have been the most patriotic in the world, and who have been the most devoted in the world. It is a history of a people who have been the most virtuous in the world, and who have been the most noble in the world.

THE HISTORY OF THE UNITED STATES, from the first settlement of the colonies to the present time, is a subject of great interest and importance. It is a subject which has attracted the attention of the whole world, and which has been the subject of many valuable works. The history of the United States is a history of a people who have been the most successful in the world, and who have been the most powerful in the world. It is a history of a people who have been the most generous in the world, and who have been the most brave in the world. It is a history of a people who have been the most industrious in the world, and who have been the most enterprising in the world. It is a history of a people who have been the most patriotic in the world, and who have been the most devoted in the world. It is a history of a people who have been the most virtuous in the world, and who have been the most noble in the world.

## CHAPTER XI.

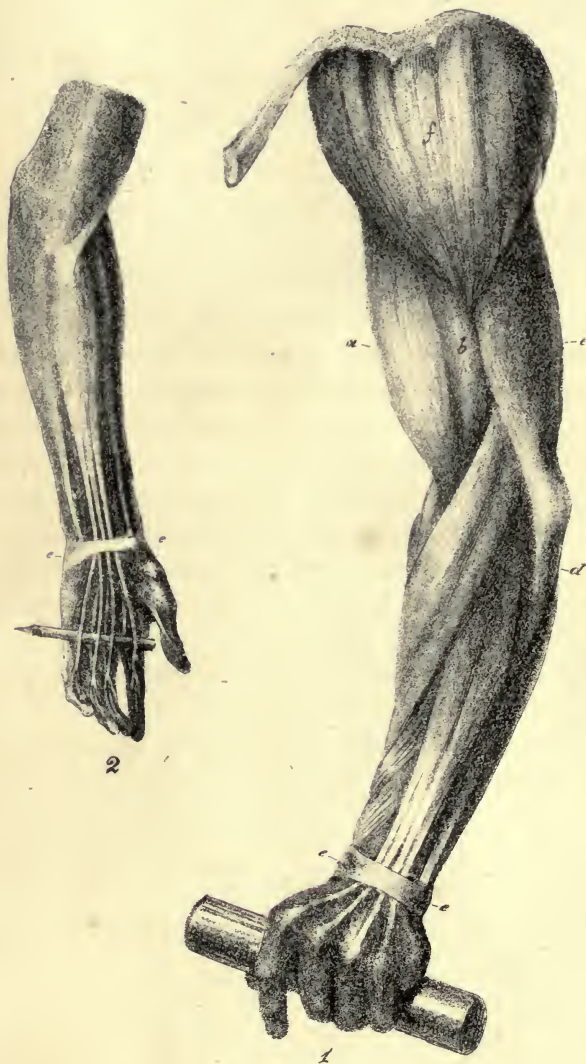
### TAB. XIII.—THE MUSCLES OF THE ARM.

FIG. 1. *a*, the *biceps* (*biceps flexor cubiti*) arise by two portions from the scapula; they form a thick mass of flesh in the middle of the arm, which is finally inserted into the upper end of the radius; *b*, the *brachæus internus*, arises from the middle of the *os humeri*, and is inserted into the ulna. Both these muscles bend the fore-arm. *c*, the *longus et brevis brachæus externus*; these are better named as one muscle, *triceps extensor cubiti*. It is attached to the inferior edge of the scapula, and to the *os humeri*, by three distinct heads, which unite and invest the whole back part of the bone, becoming a strong tendon which is implanted into the elbow. It is a powerful extensor of the fore-arm. *d*, the *anconæus*, a small triangular muscle, situated at the outer side of the elbow: it assists the last muscle.

FIG. 1 and 2. *e, e*, the *annular ligament* of the wrist, under which pass the tendons of the muscles of the fingers.

FIG. 2. *f*, the *deltoid muscle*; the muscle at the shoulder by which the arm is raised.

TAB. XIII.







THE

THE

THE

THE

THE

THE

THE

THE

THE

THE

THE

THE

THE

THE

THE

THE

THE

THE

THE

THE

THE

THE

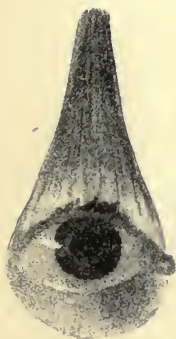
## CHAPTER IX.

### TAB. XIV.—THE MUSCLES THAT RAISE THE EYE-LIDS, AND SPHINCTER OR CIRCULAR MUSCLES.

FIG. 1. A front view of this muscle named *levator palpebræ superioris*: FIG. 2. a profile of the same in its natural position. This muscle arises within the orbit, and is inserted by a broad tendon into the upper eye-lid.

FIG. 3. exhibits examples of *sphincter* muscles: *a, a*, the *orbicularis palpebrarum*, encircling the eyelid; it closes the eye, and compresses it with spasmodic violence when injured by particles of dust, &c. *b*, the *orbicularis oris*, surrounding the mouth; its chief use is to contract the lips.

TAB. XIV.



1



2



3



OF THE

THE

THE

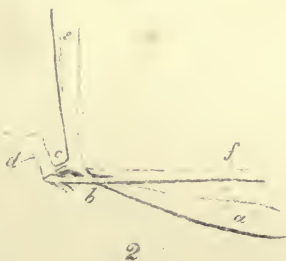


## CHAPTER IX.

### TAB. XV.—THE DIGASTRIC MUSCLE.

FIG. 1 and 2. The *digastric muscle* has its origin, *a*, at the lower part of the temporal bone; it runs downwards and forwards, and forms a strong round tendon, *b*, which passes through the stylo-hyoïdeus, *f*; it is then fixed by a strong ligament, *c*, to the os hyoïdes, *d*; it again becomes fleshy, runs upwards, and is inserted into the chin. This description differs from Dr. Paley's, and it will be found by reference to dissections or the plate, that the os hyoïdes furnishes a *stay* or *brace* instead of a pulley, and that the *loop* or *ring* is in the stylo-hyoïdeus muscle.

TAB. XV.







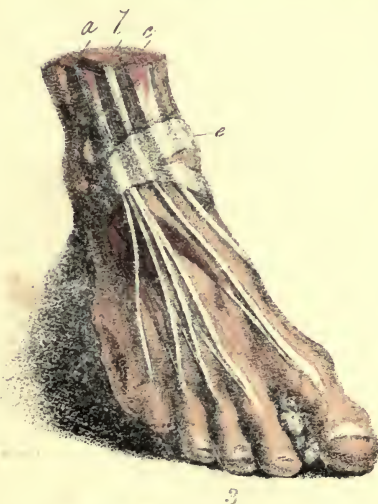
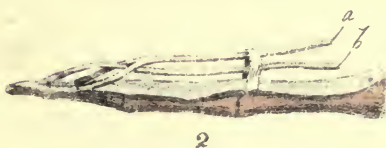
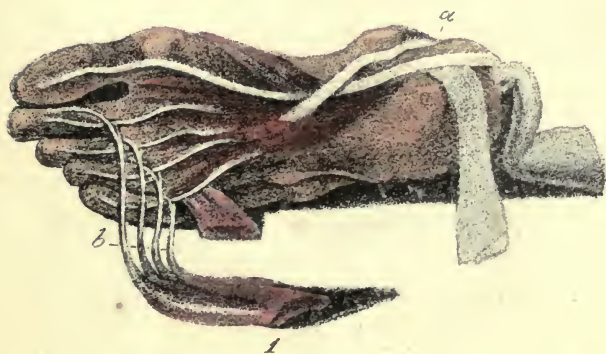
## CHAPTER IX.

### TAB. XVI.—THE TENDONS OF THE TOES.

FIG. 1. *a*, the tendon of the *long flexor of the toes*, which divides about the middle of the foot into four portions, passing through the slits in *b*, the *short flexor tendons*. Fig. 2. explains a similar contrivance belonging to each finger: *a*, a tendon of the *flexor sublimis*; *b*, a tendon of the *flexor profundus*, passing through it.

FIG. 3. *a*, *b*, tendons of the extensor muscles of the toes; *c*, a tendon of a flexor of the foot. These are bound down and retained *in situ* by *e*, the *annular ligament* of the instep.

TAB. XVI.









## CHAPTER X.

### TAB. XVII.—THE HEART.

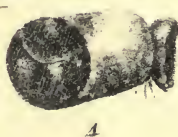
FIG. 1. A section of the human heart; *a, a*, the *superior* and *inferior vena cava*, the veins which convey the blood to the, *b*, *right auricle*; and thence into, *c*, the corresponding *ventricle*; from this ventricle the blood is impelled through, *e*, the *pulmonary artery* into the lungs; and returning by, *ff*, the *pulmonary veins*, it is received into, *g*, the *left auricle*: it flows next into, *h*, the *left ventricle*; which by its contraction distributes the blood through the general arterial system:—*j*, the *aorta*, the great artery which transmits blood to the different parts of the body, from whence it is returned by veins to the *cavæ*: *k*, the *right subclavian*; *l*, the *right carotid* arteries, originating from one common trunk; *m*, the *left carotid*; *n*, the *left subclavian*: *d*, the *valves* of the right; *i*, the *valves* of the left ventricle.

Fig. 2. the valves of the right side (*tricuspid valves*) separated from the heart; *a, a, a*, the *carneæ columnæ*, or muscular fibres of the valve; *b, b, b*, the *chordæ tendineæ*, or tendinous filaments which are attached to, *c*, the valves.

FIG. 3. Exhibits the *artery* cut open with the form of the *semilunar valves*.

FIG. 4. a portion of the artery filled, shewing how effectually the valves prevent the retrograde motion of the blood.

TAB. XVII.









## CHAPTER X.

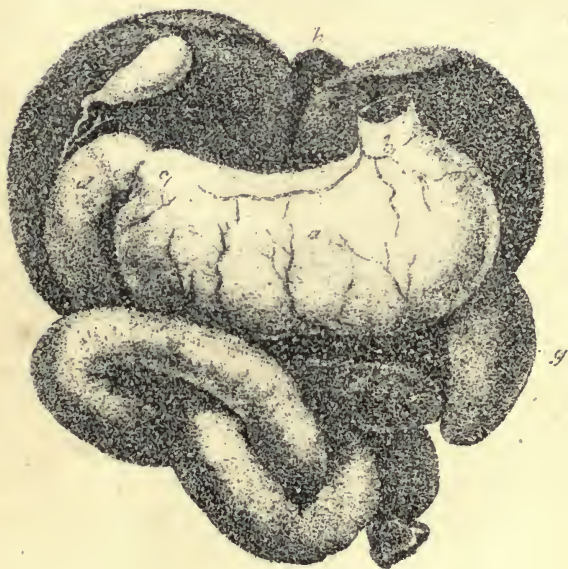
### TAB. XVIII.—THE STOMACH, GALL BLADDER, &c.

FIG. 1. *a*, the *stomach*; *b*, the *cardia*; *c*, the *pylorus*. The *gastric juice* is a secretion derived from the inner membrane of the stomach, and digestion is principally performed by it. In the various orders of animated beings it differs, being adapted to the food on which they are accustomed to subsist. The food, when properly masticated, is dissolved by the gastric fluid, and converted into *chyme*; so that most kinds of the ingesta lose their specific qualities; and the chemical changes to which they would otherwise be liable, as putridity and rancidity, &c. are thus prevented.

In this plate, *h*, the *liver* is turned up, in order to shew the *gall-bladder* which is attached to its concave surface; *d*, the *duodenum*; *e*, part of the small *intestines*; *f*, the *pancreas*; and *g*, the *spleen*.

FIG. 2. explains the several ducts and their communication with the *duodenum*; *a*, the *gall-bladder*; *b*, the *ductus cysticus*; which uniting with, *c*, the *ductus hepaticus*, forms, *d*, the *ductus communis*; which, after passing between the muscular and inner coats of the intestine, opens into it at *e*. *f*, the *pancreatic duct*. The bile is said to become more viscid, acrid, and bitter, from the thinner parts being absorbed during its retention in the gall-bladder.

TAB. XVIII.







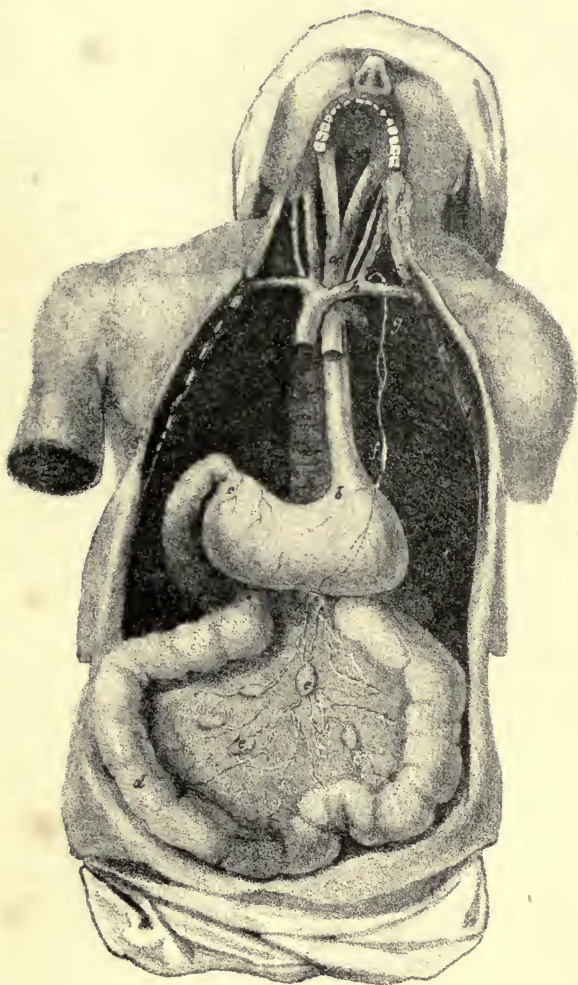
## CHAPTER X.

### TAB. XIX.—THE LACTEALS, AND THORACIC DUCT.

The figure in this plate represents the course of the food, from its entrance at the mouth to its assimilation with the blood; *a*, the *œsophagus*, extending from the *pharynx* to, *b*, the *stomach*; where the alimentary matter having undergone the digestive process, escapes at, *c*, the *pylorus*, into, *d*, the *intestines*. In this plate a large portion of the latter is spread out to shew a part of the absorbent system called *lacteals*: these collect and imbibe the *chyle* from the *ingesta*, and transmit it through, *e*, *e*, the *mesenteric glands*, into one general receptacle, *f*, (*receptaculum chyli*,) from which, *g*, the *thoracic duct* ascends in a more or less tortuous direction to the lower vertebræ of the neck, and after forming an arch, it descends and enters, *h*, the left *subclavian vein*, at the point where that vein is united with the *internal jugular*. The absorbents of the right side frequently form a trunk, which enters the *right subclavian vein*.



TAB. XIX.







1844

1844

1844

1844

## CHAPTER X.

### TAB. XX.—THE PAROTID GLAND.

FIG. 1. A dissection to exhibit the *parotid gland*.

FIG. 2. Explains the former; *a, a*, the integuments turned back; *b*, the *parotid gland*; *c*, its *pipe* or *duct* passing over the *masseter*, then perforating, *d*, the *buccinator muscle*, and opening into the mouth opposite the second molar tooth.

TAB. XX.









## CHAPTER X.

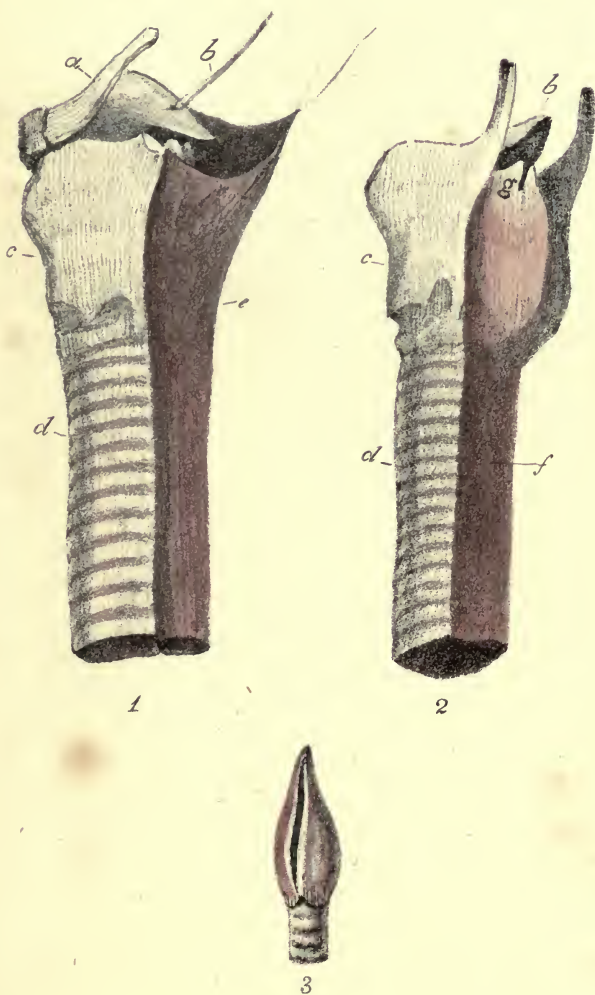
### TAB. XXI.—THE LARYNX.

FIG. 1. The *larynx*, *pharynx*, &c. *a*, the *os hyoïdes*, *b*, the *epiglottis* pressed down, thus covering the *glottis*, or opening of the *larynx*; as it does in the act of deglutition.

FIG. 2. Exhibits the *larynx*, and *trachea*; which is a continuation of the former; *b*, the *epiglottis*; *g*, the *arytenoïd cartilages*; *e*, the *thyroïd cartilage*, exceedingly strong, for the protection of the upper part of the air tube; *d*, the *cartilaginous ringlets* of the *trachea* or *wind-pipe*, each forming nearly two-thirds of a circle, and completed by a soft *membrane*, which, from its apposition to, *e*, Fig. 1. the *œsophagus*, accommodates itself to the substances passing into the stomach.

FIG. 3. The *larynx* or *upper* part of the wind-pipe of a bird.

TAB. XXI.





It is in the history of the United States that we find the most complete and accurate record of the progress of the nation. The history of the United States is a history of the progress of the nation, and it is in the history of the United States that we find the most complete and accurate record of the progress of the nation. The history of the United States is a history of the progress of the nation, and it is in the history of the United States that we find the most complete and accurate record of the progress of the nation.

The history of the United States is a history of the progress of the nation, and it is in the history of the United States that we find the most complete and accurate record of the progress of the nation. The history of the United States is a history of the progress of the nation, and it is in the history of the United States that we find the most complete and accurate record of the progress of the nation. The history of the United States is a history of the progress of the nation, and it is in the history of the United States that we find the most complete and accurate record of the progress of the nation.

The history of the United States is a history of the progress of the nation, and it is in the history of the United States that we find the most complete and accurate record of the progress of the nation. The history of the United States is a history of the progress of the nation, and it is in the history of the United States that we find the most complete and accurate record of the progress of the nation. The history of the United States is a history of the progress of the nation, and it is in the history of the United States that we find the most complete and accurate record of the progress of the nation.

## CHAPTER XI.

### TAB. XXII.—PACKAGE OF THE VISCERA, AND MESENTERY.

FIG. 1. In this plate the parietes of the chest and abdomen, with the omentum, are removed to shew the viscera *in situ*; *a*, the *heart*; *b*, the *aorta*; *c*, the *descending vena cava*; *d*, the *lungs* divided by the mediastinum into two portions; three lobes belong to the right, and two to the left portion of the lungs; *e*, the *diaphragm*; *f*, the *liver*; *g*, the *gall-bladder*; *h*, the *stomach*; *i*, the *spleen*; *k*, the *large intestines*; *l*, the *small intestines*; *m*, the *bladder*.

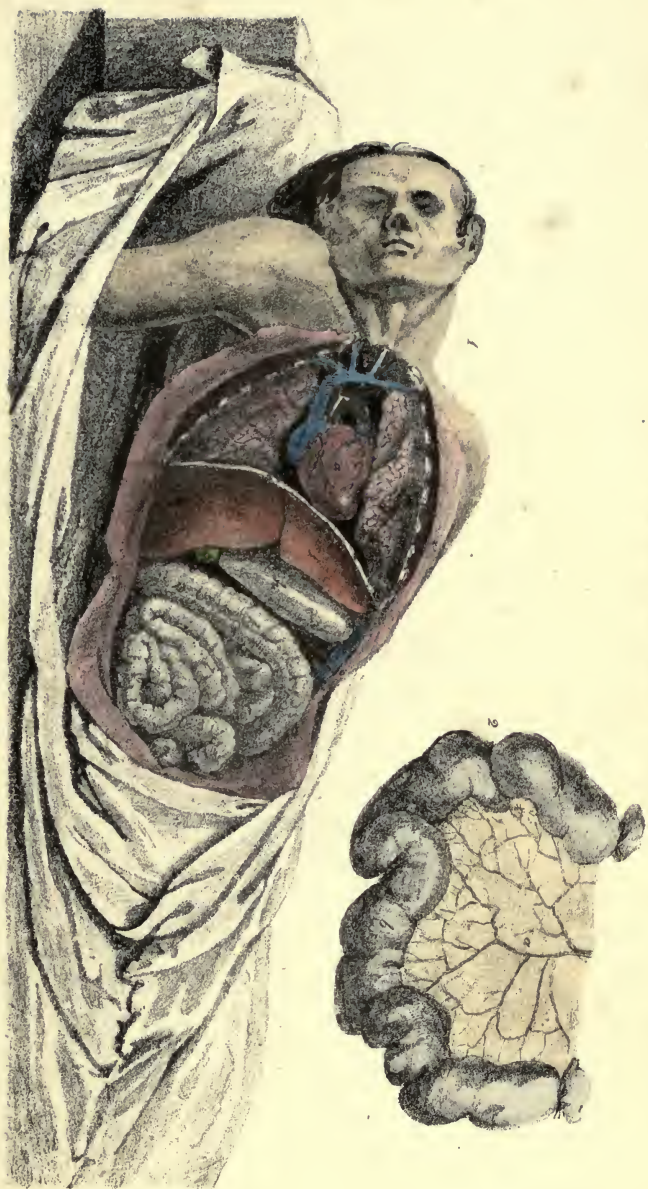
The viscera of the thorax and abdomen, *i. e.* the viscera of *organic life*, are *irregularly* disposed. The *agents of volition* are double, but the instruments of *involuntary motion*, namely the interior life, are single, and at least are irregular in their form.

The several viscera are correctly described in the Theology, and sufficient is said for the purposes for which they are introduced. To the supposed use of the *spleen* only an objection must be taken: various hypotheses have been entertained as to its office, but none are conclusive; the most probable is, that it is a source of supply of blood for furnishing the gastric secretion, or that the blood undergoes some important change in it.

FIG. 2. The *mesentery*. This membrane is formed by a reflection of the *peritonæum* from each side of the vertebræ; it connects the intestines loosely to the spine, to allow them a certain degree of motion, yet retains them in their places; and furnishes their exterior covering. Between the laminae of, *a*, the *mesentery*, are received the *glands*, *vessels*, and *nerves*; and its extent admits of a proper distribution of each.



TAB. XXXII.



*Published by James Paxton.*





# CHAPTER XII

THE KNEE-STRAP OF THE HILL OF A HILL  
 FATHERS OF THE HILL OF A HILL  
 OF A HILL OF A HILL OF A HILL

THE KNEE-STRAP OF THE HILL OF A HILL  
 FATHERS OF THE HILL OF A HILL  
 OF A HILL OF A HILL OF A HILL

THE KNEE-STRAP OF THE HILL OF A HILL  
 FATHERS OF THE HILL OF A HILL  
 OF A HILL OF A HILL OF A HILL

THE KNEE-STRAP OF THE HILL OF A HILL  
 FATHERS OF THE HILL OF A HILL  
 OF A HILL OF A HILL OF A HILL

THE KNEE-STRAP OF THE HILL OF A HILL  
 FATHERS OF THE HILL OF A HILL  
 OF A HILL OF A HILL OF A HILL

## CHAPTER XII.

TAB. XXIII.—NERVES OF THE BILL OF A DUCK,  
VALVULÆ CONNIVENTES. CHAP. XIII. AIR-BLADDER  
OF A FISH, AND FANG OF THE VIPER.

FIG. 1. The upper *mandible* of the duck, on which are distributed the first and second branches of the fifth pair of nerves; the former passing through the orbit to the extremity of the bill, and, together with the latter, supplying the whole palatine surface.

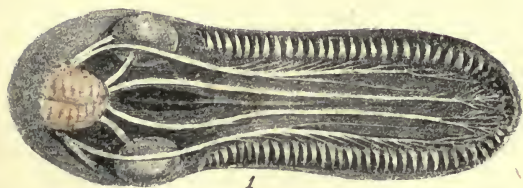
FIG. 2. A small portion of the human intestine cut open in order to shew the *valvulæ conniventes*. It may be questioned, whether these extremely soft rugæ or folds of the villous coat of the intestine can in the least retard the passage of the food through its canal; nor does, as Paley supposes, the erect attitude of man require them; for, since there are as many of the convolutions of the intestines ascending as there are descending, the weight of the food can have no influence in the action of the intestine: it is certain, however, that this arrangement of the internal coat, affords *a more extensive surface for the lacteals and secreting vessels*; and this appears to be the real use of the *valvulæ conniventes*.

FIG. 3. The *air-bladder* in the roach. This vessel differs in size and shape, in different species of fish; generally communicating, by one or more ducts, either with the œsophagus or stomach; by which means the fish receives or expels the air, thus sinking or rising without effort: but as some are destitute of this organ, it is considered as an accessory instrument of motion.

FIG. 4. The head of a viper of the natural size.

FIG. 5. The *fang* magnified, at the root of which is the gland which secretes the venom: a hair is represented in the tube, through which the poison is ejected.

TAB. XXIII.









## CHAPTER XIII.

### TAB. XXIV.—THE OPOSSUM.

FIG. 1. The American opossum ; (*didelphis marsupialis*.)

FIG. 2. One of the young of the opossum.

FIG. 3. The pelvis of the opossum ; *a, a*, the two bones (*ossa marsupialia*) placed on the anterior part called the *ossa pubis*. Drawn from a specimen in the Museum of the Royal College of Surgeons, London.

The kangaroo and several other animals of New Holland have a similar structure.

TAB. XXIV.



1722-1723



THE  
THE  
THE

THE  
THE  
THE

### CHAPTER XIII.

TAB. XXV.—CLAW OF THE HERON, AND BILL OF THE  
SOLAND GOOSE.

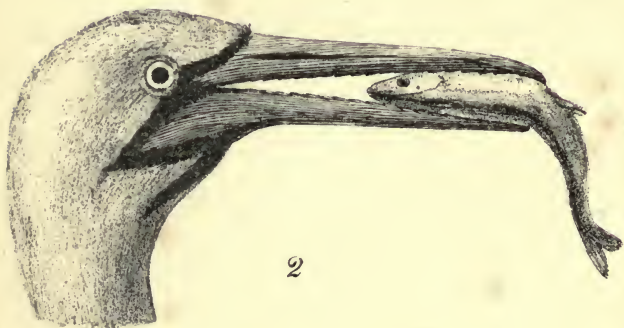
FIG. 1. *The middle claw of the heron.*

FIG. 2. The head of the *Soland goose*, (*pelicanus bassanus*)  
drawn from a specimen in the Ashmolean Museum, Oxford.

TAB. XXV.



1



2





THE HISTORY OF

THE CITY OF BOSTON

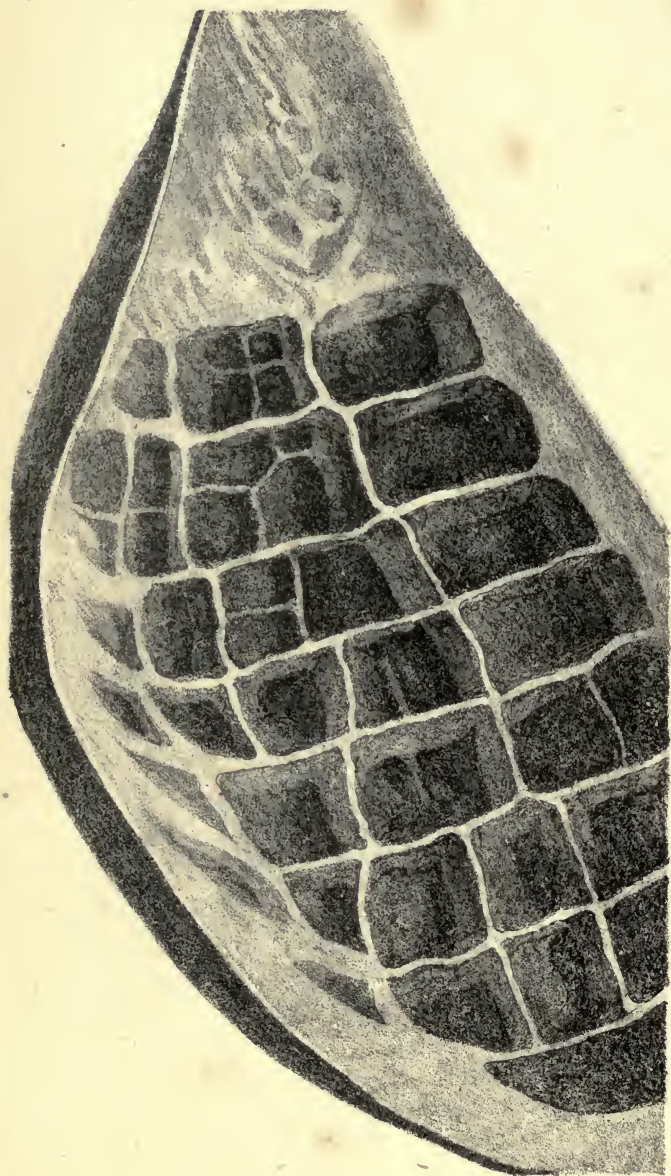
FROM THE FIRST SETTLEMENT IN 1630 TO THE PRESENT TIME  
BY SAMUEL JOHNSON  
OF THE BOSTON SOCIETY OF THE HISTORY OF THE CITY  
OF BOSTON  
PUBLISHED BY THE BOSTON SOCIETY OF THE HISTORY OF THE CITY  
OF BOSTON  
IN 1822  
BOSTON: PUBLISHED BY THE BOSTON SOCIETY OF THE HISTORY OF THE CITY  
OF BOSTON  
IN 1822

## CHAPTER XIII.

### TAB. XXVI.—STOMACH OF THE CAMEL.

The figure in this plate exhibits the *cells in the stomach of the camel*, from a preparation in the museum of the Royal College of Surgeons, London. In the camel, dromedary, and lama, there are four stomachs, as in horned ruminants; but the structure, in some respects, differs from those of the latter. The camel tribe have in the first and second stomach numerous cells, several inches deep, formed by bands of muscular fibres crossing each other at right angles; these are constructed so as to retain the water, and completely exclude the food. In a camel dissected by Sir E. Home, the cells of the stomach were found to contain two gallons of water; but in consequence of the muscular contraction, which had taken place immediately after death, he was led to conclude this was a quantity much less than these cavities were capable of receiving in the living animal. See Lectures on Comparative Anatomy, by Sir E. Home, vol. i. p. 168.

TAB. XXVI.





1871

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO  
LIBRARY  
CHICAGO, ILL.  
1871



## CHAPTER XIII.

### TAB. XXVII.—TONGUE OF THE WOODPECKER, AND SKULL OF THE BABYROUESSA.

FIG. 1. The *head of the woodpecker*, (*picus viridis*.)

FIG. 2. The *tongue*, the natural size.

FIG. 3. The *claw* of the same bird, referred to in Chap. V.

FIG. 4. The *skull of the babyrouessa*, from a specimen in the Anatomy School, Christ Church, Oxford.

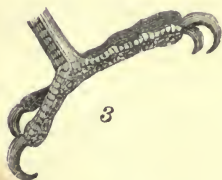
TAB. XXVII.



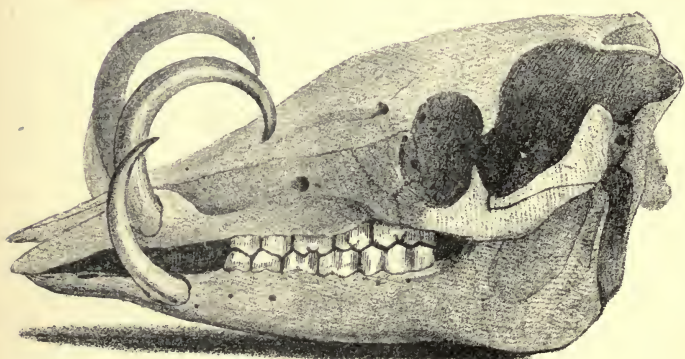
1



2



3



4



THE HISTORY OF THE

REIGN OF THE

EMPEROR

## CHAPTER XIV.

### TAB. XXVIII.—TEMPORARY AND PERMANENT TEETH.

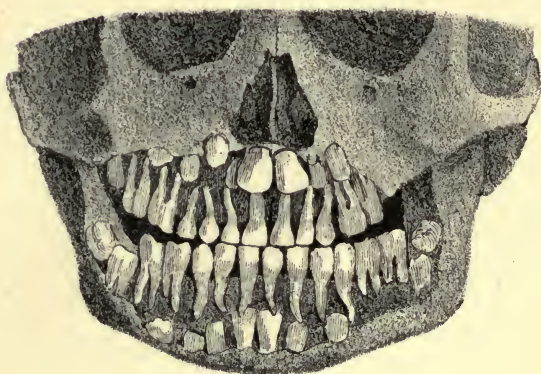
FIG. 1. The gums and outer plate of the bone are removed, shewing the teeth of the infant, as they exist at the time of its birth; they are without roots, and contained in a capsule within the jaws.

FIG. 2. In this figure also, the outer alvelolar plate of the jaws has been removed to shew the succession of teeth. This is the state at six years of age. The *temporary* teeth are all shed between the ages of seven and fourteen, and are supplied by the *permanent teeth*, already nearly perfectly formed, and situated at the roots of the former.

TAB. XXVIII.



1



2





## THE HISTORY

OF THE

REIGN OF

CHARLES THE FIRST

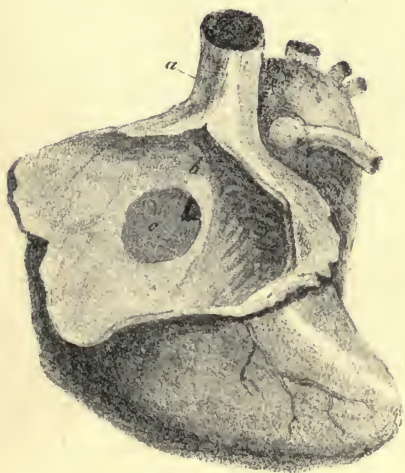
## CHAPTER XIV.

### TAB. XXIX.—FORAMEN OVALE, AND DUCTUS ARTERIOSUS.

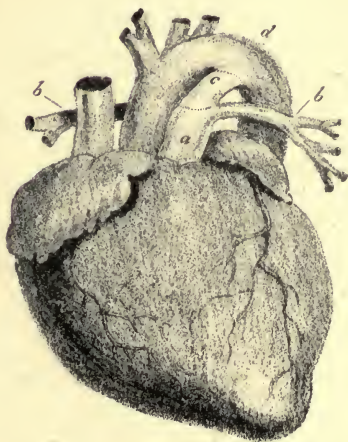
FIG. 1. A view of the fœtal heart; *a*, the ascending, *b*, the descending vena cava; *c*, the right auricle; *d, e, f*, mark the elevated ring of the *foramen ovale*, or the opening between the two auricles.

FIG. 2. The fœtal heart; *a*, the pulmonary artery; *b b*, its branches; *c*, the *ductus arteriosus*, or canal for transmitting the blood into *d* the aorta. As the lungs are useless in the fœtus, unless as a “prospective contrivance,” the heart has to carry on a single circulation only: the free communication between the two auricles identifies them as one cavity; and the ventricles also force the blood into one vessel, the aorta.

TAB. XXIX.



1



2







## CHAPTER XVI.

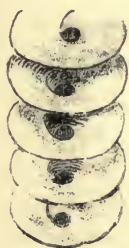
### TAB. XXX.—THE CHAMELEON, AND GUT OF THE SEA FOX.

FIG. 1. The *chameleon*, drawn from one of the species preserved in the Anatomy School, Christ Church, Oxford. The eyes of this creature are very peculiar: they are remarkably large, and project more than half their diameter. They are covered with a single eye-lid, with a small opening in it opposite the pupil. The eye-lid is granulated like every part of the surface of the body, with this difference, over the eye the granulations are disposed in concentric circles which form folds in that part to which the eye is turned: and as the lid is attached to the front of the eye, so it follows all its movements. The neck is not “inflexible,” but its shortness, and the structure of the cervical vertebræ exceedingly limit the motion; this however is admirably compensated by the not less singular local position than motion of the eye, as the animal can see behind, before, or on either side, without turning the head.

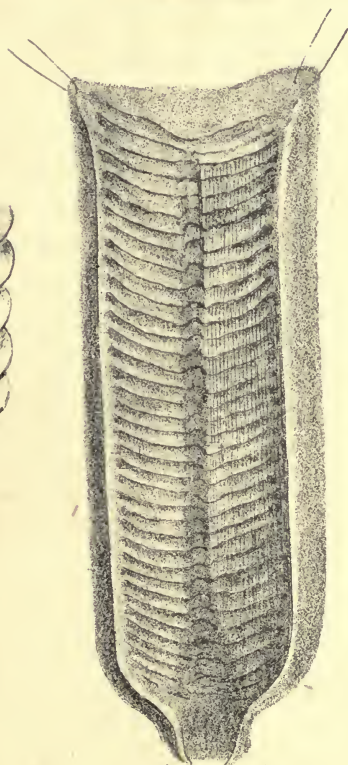
FIG. 2. The spiral intestine of the *sea-fox* cut open; taken from a preparation in the museum of the Royal College of Surgeons London. The sea-fox is not, as Paley supposes, a “quadruped;” but a species of shark (*squalus vulpes*.) The convoluted intestinal tube is found in some genera of fish, only. In this specimen the internal membrane is converted into a spiral valve, having thirty-six coils, so that the alimentary substances, instead of passing speedily away, by proceeding round the turns of the valve, traverse a very considerable circuit: an extensive surface for the absorbents is thus provided.

FIG. 3. The valve removed from the intestine in a dried preparation shewing its real form.

TAB. XXX.



3



2





## CHAPTER XIX.

### TAB. XXXI.—THE WINGS OF THE BEETLE, AWL, STING OF THE BEE, PROBOSCIS, &c.

FIG. 1. Is an instance of the horny and gauze wings in one of the most beautiful of the beetle class of this country, the *scarabæus auratus*, or rose chafer; shewing the expanded *elytra*, *a, a*: the true wings, *b, b*.

FIG. 2. A specimen of the *elytra* covering half the body in the *ear-wig*, *forficula auricularia*:) one of the *elytra* is extended, and the membranous wing unfolded.

FIG. 3. The *awl* of the *æstrum bovis*, or *gad-fly*, highly magnified.

FIG. 4. One of the *hooks*.

FIG. 5. The *sting* of a *bee*, drawn from nature as it appears by means of a magnifier of very high powers; *a, a, a, a*, the apparatus for projecting the sting; *b*, the exterior, *c*, the interior sheath of *d*, the *true sting*, which is divided into two parts barbed at the sides; *e*, the bag which contains the *poison*.

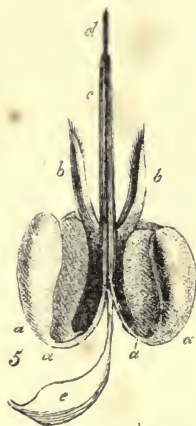
FIG. 6. The *proboscis* of a *bee* extended; *a, a*, the case or sheath; *b*, the tube; *c*, the exterior; *d*, the interior fringes; *e*, the tongue; *f, f*, the exterior, *g, g*, the interior palpi.

FIG. 7. The appearance of the *proboscis* when contracted, and folded up.

FIG. 8. The head of a *butterfly*, shewing the *coiled proboscis*.



# TAB. XXXI.







## THE HISTORY

OF THE

REIGN OF

CHARLES THE FIRST

BY

## CHAPTER XX.

### TAB. XXXII.—THE CAPSULE, PISTIL, STAMINA, NIGELLA, PLUMULE, AND RADICLE.

FIG. 1. The *capsule* or seed vessel of the poppy: (*papaver somniferum* :) it is divided to exhibit its internal structure.

FIG. 2. Is an instance of an erect flower, the agave *Americana*; in which the pistil is shorter than the stamina.

FIG. 3. A flower of the *crown-imperial*. The relative length of the parts is now inverted.

FIG. 4. A blossom of the *nigella*.

FIG. 5. A grain of barley, shewing the *plumule* and *radicle* growing from it.

TAB. XXXII.









## CHAPTER XX.

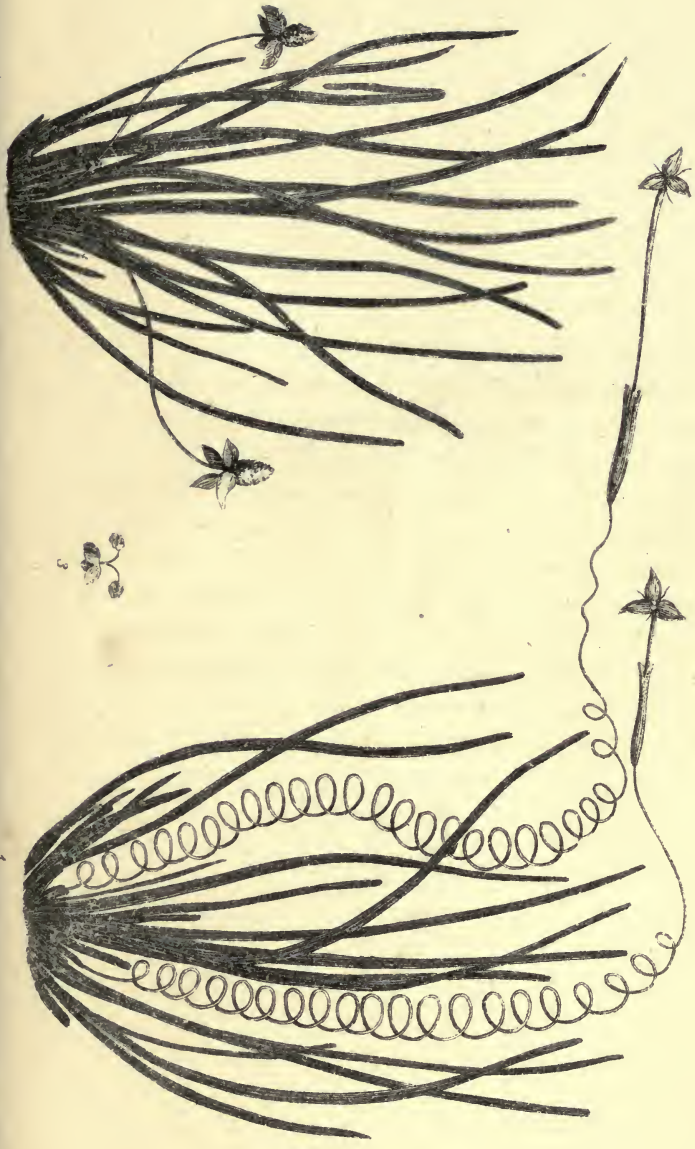
### TAB. XXXIII.—VALLISNERIA.

FIG. 1. *Vallisneria spiralis*. The *female plant*, the flowers of which are purple. This is drawn from a specimen in the possession of Dr. Ogle.

FIG. 2. The *male plant*, producing white flowers; these when mature rise like air bubbles, and suddenly expanding when they reach the surface of the water, float about in such abundance as to cover it entirely. "Thus their pollen is scattered over the stigmas of the first mentioned blossoms, whose stalks soon afterwards resume their spiral figure, and the fruit comes to maturity at the bottom of the water."

FIG. 3. One of the separated *male* flowers magnified.

TAB. XXXIII.







## CHAPTER XX.

### TAB. XXXIV.—CUSCUTA EUROPÆA.

This plant is a native of our own country, and is found in hedges, on clover, or on beans, where it proves exceedingly injurious to the crop. It flowers from June to August. The drawing was taken from a specimen which grew in the Physic Gardens, Oxford. It is represented twining about some nettles on which it annually attaches itself.

“Of all the parasitical plants, the dodder (*cuscuta*) tribe are the most singular, trusting for their nourishment entirely to those vegetables about which they twine, and into whose tender bark they insert small villous tubercles serving as roots, the original root of the dodder withering away entirely, as soon as the young stem has fixed itself to any other plant; so that its connexion with the earth is cut off.” English Botany, p. 55.

TAB. XXXIV.







22 SEP 1951

Monday, September 24, 1951

Left at 8:00 AM for the airport. The weather was very good, with a clear sky and a light breeze. The temperature was in the 70s. The traffic was light, and we arrived at the airport without any delay. The plane was on time, and we took off at 9:00 AM. The flight was smooth, and we arrived at our destination at 11:00 AM. The weather was still good, and we had a very pleasant trip. The food was excellent, and the service was first-class. We had a very good time, and we will be back soon.

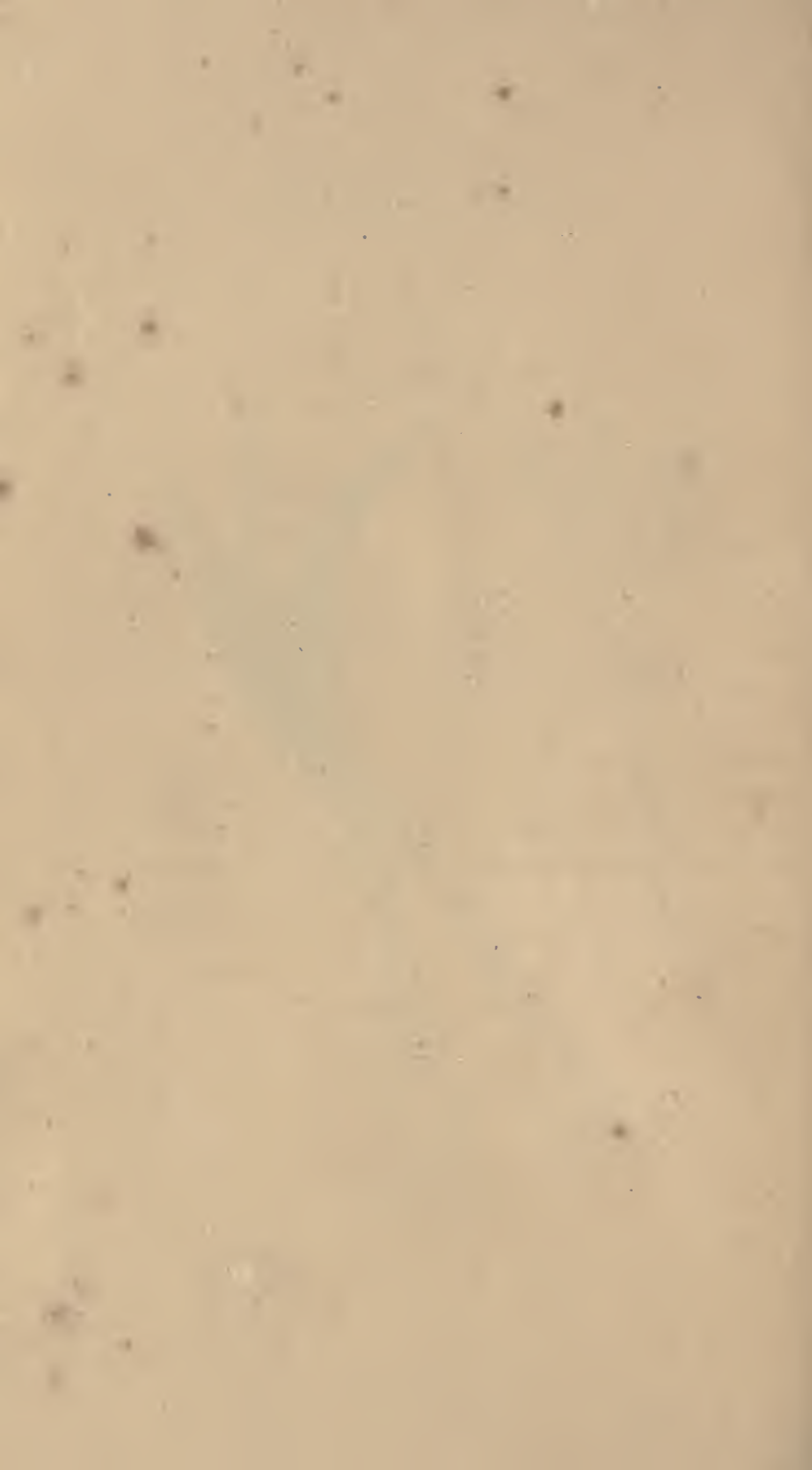
## CHAPTER XX.

### TAB. XXXV.—THE AUTUMNAL CROCUS.

The *colchicum autumnale*. This plant before us exhibits a mode of fructification scarcely paralleled among British vegetables. The flowers appearing very late in autumn, the impregnated germen remains latent under ground close to the bulb till the following spring, when the capsule rises above the surface accompanied by several long upright leaves, and the seeds are ripened about June, after which the leaves decay. See British Botany, vol. i. p. 133. The plant is represented as it appears in *spring*; the root is divided to shew the *seed vessel* near the bulb. The flower is remarkable for the length of its tube.

TAB. XXXV.





REIGN OF

CHARLES THE FIRST

BY JOHN BURNET

THE HISTORY OF THE REIGN OF CHARLES THE FIRST, BY JOHN BURNET, A BISHOP OF SALISBURY. IN TWO VOLUMES. THE FIRST VOLUME. LONDON, Printed by J. Streater, at the Sign of the Gun, in St. Dunstons Church-yard, 1680.

THE SECOND VOLUME. LONDON, Printed by J. Streater, at the Sign of the Gun, in St. Dunstons Church-yard, 1680.



## CHAPTER XX.

### TAB. XXXVI.—THE *DIONÆA MUSCIPULA*.

Venus's fly-trap. Some parts of this plant are so remarkable as to deserve a particular description. It is a native of North Carolina; the root perennial; leaves all radical, supported on long fleshy and strongly veined footstalks, leaving a small portion of this next the leaf naked: the leaf itself consists of two semi-oval lobes jointed at the back, so as to allow them to fold close together; they are fleshy, and when viewed through a lense glandular, sometimes of a reddish colour on the upper surface; the sides of both lobes are furnished with a row of cartilaginous ciliæ which stand nearly at right angles with the surface of the leaf, and lock into each other when they close. Near the middle of each lobe are three small spines, which are supposed to assist in destroying the entrapped insect. In warm weather the lobes are fully expanded and highly irritable, and if a fly or other insect at this time light upon them they suddenly close, and the poor animal is imprisoned till it dies. See Curtis's Botanical Magazine, No. 785.

TAB. XXXVI.





# INDEX.

- Tab. 1. Parts of a watch.
- Tab. 2. Lens of a fish—Humours of the eye—Image formed on the retina—Lens of a telescope—Crystalline lens—Iris and straight muscles of the eye.
- Tab. 3. Bony rim in the eye of birds—Marsupium and eye of the eel.
- Tab. 4. Lachrymal gland and duct—Nictitating membrane and its muscles.
- Tab. 5. The anatomy of the human ear, and the tympanum of the elephant.
- Tab. 6. The trochlear muscle of the eye, and section of the human kidney.
- Tab. 7. The bones of the head and neck.
- Tab. 8. Bones of the arm.
- Tab. 9. The human spine, and vertebræ of the serpent.
- Tab. 10. The thorax—Patella, and scapula.
- Tab. 11. The hip joint—Knee, interarticular cartilages, and ankle joint.
- Tab. 12. Sartorius muscle, and oblique muscles of the head.
- Tab. 13. The muscles of the arm.
- Tab. 14. Muscles of the eye-lid, and sphincters.
- Tab. 15. Digastric muscle.
- Tab. 16. Flexors of the toes, and ligaments across the instep.
- Tab. 17. The heart and its valves.
- Tab. 18. The stomach, liver, gall bladder, &c.
- Tab. 19. The lacteals and thoracic duct, shewing the course of the food.
- Tab. 20. The parotid gland and its duct.
- Tab. 21. The larynx, trachea, œsophagus, &c.
- Tab. 22. Package of the viscera, and mesentery.
- Tab. 23. Nerves in the bill of the duck—Valvulæ conniventes—Air-bladder of a fish, and fang of a viper.
- Tab. 24. The opossum and its young, and the pelvis.
- Tab. 25. Middle claw of the heron—Bill of the Soland goose.
- Tab. 26. Stomach of the camel.
- Tab. 27. Tongue of the woodpecker, and skull of the babyrouessa.
- Tab. 28. Temporary and permanent teeth.
- Tab. 29. Foramen ovale, and ductus arteriosus in the fœtal heart.
- Tab. 30. The eye of a chameleon, and the intestine of the sea-fox.
- Tab. 31. The elytra of the scarabæus auratus—Awl of the œstrum bovis—Sting and proboscis of the bee—Proboscis of the butterfly.
- Tab. 32. The seed vessel of the poppy—Stamina and pistil in the agave—in the crown imperial—Blossom of the nigella—Plumule and radicle.
- Tab. 33. The vallisneria spiralis.
- Tab. 34. Cuscuta Europæa.
- Tab. 35. Colchicum autumnale.
- Tab. 36. Dionæa muscipula.

1. The first of these is the fact that the number of species of plants which are found in the same place at the same time is very small. This is true of all the groups of plants which have been examined, and it is true of all the groups of animals which have been examined. The number of species of plants which are found in the same place at the same time is very small. This is true of all the groups of plants which have been examined, and it is true of all the groups of animals which have been examined.
2. The second of these is the fact that the number of species of plants which are found in the same place at the same time is very small. This is true of all the groups of plants which have been examined, and it is true of all the groups of animals which have been examined.
3. The third of these is the fact that the number of species of plants which are found in the same place at the same time is very small. This is true of all the groups of plants which have been examined, and it is true of all the groups of animals which have been examined.
4. The fourth of these is the fact that the number of species of plants which are found in the same place at the same time is very small. This is true of all the groups of plants which have been examined, and it is true of all the groups of animals which have been examined.
5. The fifth of these is the fact that the number of species of plants which are found in the same place at the same time is very small. This is true of all the groups of plants which have been examined, and it is true of all the groups of animals which have been examined.
6. The sixth of these is the fact that the number of species of plants which are found in the same place at the same time is very small. This is true of all the groups of plants which have been examined, and it is true of all the groups of animals which have been examined.
7. The seventh of these is the fact that the number of species of plants which are found in the same place at the same time is very small. This is true of all the groups of plants which have been examined, and it is true of all the groups of animals which have been examined.
8. The eighth of these is the fact that the number of species of plants which are found in the same place at the same time is very small. This is true of all the groups of plants which have been examined, and it is true of all the groups of animals which have been examined.
9. The ninth of these is the fact that the number of species of plants which are found in the same place at the same time is very small. This is true of all the groups of plants which have been examined, and it is true of all the groups of animals which have been examined.
10. The tenth of these is the fact that the number of species of plants which are found in the same place at the same time is very small. This is true of all the groups of plants which have been examined, and it is true of all the groups of animals which have been examined.















**14 DAY USE**  
**RETURN TO DESK FROM WHICH BORROWED**  
**LOAN DEPT.**

This book is due on the last date stamped below, or  
on the date to which renewed.  
Renewed books are subject to immediate recall.

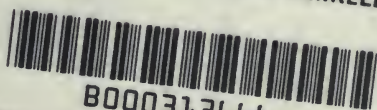
9 Nov '62 WA	
OCT 26 1962	AUG 26 1988
REC'D LD	AUTO. DISC.
OCT 27 1962	JUL 26 1988
	CIRCULATION
10 Apr '65 LM	
REC'D LD	JUN 17 1994
MAR 31 '65-10 AM	
MAY 5 - 1966 20	
APR 28 '66 20 RCD	RECEIVED
	JUN 2 - 1974
MAY 23 1967 91	CIRCULATION DEPT.

**RECEIVED**  
LD 21A-50m-3 '68  
(C7097s10246B)  
MAY 7 67 9 PM  
**LOAN DEPT.**

General Library  
University of California  
Berkeley

YC154024

GENERAL LIBRARY - U.C. BERKELEY



8000313666



